

AMENDMENTS TO THE CLAIMS:

Claim 1 (currently amended): A method of inspecting a contour of a target object, said method comprising the steps of:

preparing a variable-density image of said contour;
extracting edge pixels along and from said contour on said image;
measuring directions of said edge pixels, the direction of each of said edge pixels being defined as a direction that makes a specified angle with the direction of the density gradient on said variable-density image at, said each pixel;
selecting said edge pixels sequentially one edge pixel at a time and comparing the direction of said one edge pixel with the direction of another of said edge pixels at a specified distance from said one edge pixel to obtain a comparison result; and
determining presence or absence of a defect in said contour from the comparison results obtained for said edge pixels.

Claim 2 (original): The method of claim 1 further comprising the step of selecting said specified distance.

Claim 3 (original): The method of claim 1 wherein the step of extracting edge pixels comprises the step of selecting one from a plurality of edge-extraction filters each with a mask of a different size.

Claim 4 (currently amended): An apparatus for inspecting a contour of a target object, said apparatus comprising:

image input means for obtaining a variable-density image of said target object;
edge extracting means for extracting edge pixels along and from said contour on said image;

measuring means for measuring directions of said edge pixels extracted by said edge extracting means, the direction of each of said edge pixels being defined as a direction that makes a specified angle with the direction of the density gradient on said variable-density image at, said each pixel;

comparing means for selecting said edge pixels sequentially one edge pixel at a time and comparing the direction of said one edge pixel with the direction of another of said edge pixels at a specified distance from said one edge pixel to obtain a comparison result; and

judging means for determining presence or absence of a defect in said contour from the comparison results obtained by said comparing means.

Claim 5 (original): The apparatus of claim 4 wherein said measuring means measures an angle for each of said edge pixels, said angle indicating a perpendicular direction to the direction of density gradient at said each edge pixel.

Claim 6 (original): The apparatus of claim 4 wherein said comparing means include distance setting means for setting said specified distance.

Claim 7 (original): The apparatus of claim 4 wherein said edge extracting means selects one from a plurality of edge-extraction filters each with a mask of a different size and extracts said edge pixels by using said selected edge-extraction filter.

Claim 8 (new): The method of claim 1 wherein said specified angle is 90° .

Claim 9 (new): The apparatus of claim 4 wherein said specified angle is 90° .